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Ocean Electric Field for Oceanography

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LONG-TERM GOALS

The long-term goals are to provide advice to ONR, promote graduate education in navy relevant fields and advance the use of motionally induced electric and magnetic fields for basic and applied studies.

APPROACH

The SECNAV/CNO Chairs in Oceanographic Sciences periodically meet with the CNR to discuss ocean research issues and opportunities and to provide comments on ONR policies and activities. Two graduate students were supported on this grant; both are engaged in ONR-supported research projects.

WORK COMPLETED

- Joined other Chairs in meeting with CNR, RADM Carr and RADM Klunder on 7 Nov 2011
- Supported the education and research of two graduate students in UW School of Oceanography
- Kevin Taylor and Nathan Lauffenburger, grad students, defended MS dissertations in Fall 2011
- Conducted OKMC field experiment in June 2012 with partial support from this grant
- Met with RADM Klunder during briefing at APL-UW on 17 August 2012
- Prepared several papers for publication with partial support from this grant

PUBLICATIONS (wholly or in part supported by this grant)

Gawarkiewicz, G. et al. (2011). Can we accurately predict circulation and internal waves northeast of Taiwan? Chasing Uncertainty in the Cold Dome. *Oceanography,* 24(4):110–121, http://dx.doi.org/10.5670/oceanog.2011.99

Lien, R-C, T.B. Sanford, S. Jan, M-H Chang and B-b Ma (2012). Internal tides on the East China Sea Continental Slope. *J. Mar. Res.* (submitted)

Mrvalijevic, R.A., P.G. Black, L.R. Centurioni, E.A. D'Asaro, S.R. Jayne, C. Lee, R-C Lien, J. Morzel, P.P. Niiler, L. Rainville, T.B. Sanford and T-Y Tang (2012). Evolution of the cold wake of Typhoon Fanapi. *Geophys. Res. Ltrs.* (in review)

Szuts, Z.B. and T. B. Sanford (2012). Observations of vertically-averaged velocity in the North Atlantic Current, *Deep-Sea Res. Part II,* (in press)

Sanford, T.B. (2012). Spatial Structure of Thermocline and Abyssal Internal Waves, *Deep-Sea Res. Part II,* (in press)

Terker. S.R., T.B. Sanford, J.H. Dunlap and J.B. Girton (2012). EM-POGO: A simple, absolute velocity profiler, *Deep-Sea Res. Part II,* (in press)

Lectures and Presentations

At least half a dozen presentations at ONR review and workshop meetings for QPE, ITOP, LatMix, ONR Chairs, PLUS INP, RIVIT II, plus conference presentations:

N.E. Lauffenburger, T.B. Sanford, R-C Lien: Separating internal waves and vortical motions in the open ocean. 2012 Ocean Sciences Meeting, Salt Lake City UT

Mrvaljevic, R.K., T.B. Sanford and others: What happened to the wake of typhoon Fanapi? 2012 Ocean Sciences Meeting, Salt Lake City UT

HONORS/AWARDS/PRIZES

None